

CLAIMS

1. An information processing apparatus (100) comprising:
 - a data storage unit (110) for storing data files;
 - 5 a memory (130) for spreading data files, stored in the data storage unit, as necessary;
 - a user management unit (140), preventing multiple logon by a plurality of users by prohibiting, after a predetermined user has performed a logon procedure, logon procedures by other users until a logoff procedure concerning said predetermined user is performed;
 - 10 an spreading/storing unit (120), executing, based on an operation of a user who is logged on, a file spreading process of spreading a predetermined data file, stored in the data storage unit (110), onto the memory (130), and a file storing process of storing a predetermined data file, spread on the memory (130), into the data storage unit (110);
 - 15 a program executing unit (150), executing, based on an operation of a logged-on user, a predetermined application program and a process of preparing a new data file on the memory (130) or a renewing process on an existing data file spread on the memory (130);
 - 20 a saving unit (160), executing, when a specific user executes the logoff procedure, a saving object recognizing process of recognizing, from among data files stored in the data storage unit (110), all or a predetermined portion of data files prepared or renewed based on tasks by the specific user as a saving object file or files, a saving process of copying and thereby saving the saving object file or files into an external storage device (300) via a network (200), a deleting process of deleting the saving object file or files stored in the data storage unit (110), a management information preparing process of preparing management information necessary for copying and restoring the saving object file or files, saved in the external storage device (300), into the data storage unit (110), and a management information storing process of storing the prepared management information into an external storage location (400); and
 - 25 a restoring unit (170), executing, as necessary after the specific user executes the logon procedure, a restoring process of referencing the management information and thereby copying and restoring the saving object file or files, saved in the external storage device (300), into the data

storage unit (110).

2. The information processing apparatus (100) according to Claim 1, wherein

5 the restoring unit (170) executes a preliminary restoring process of restoring a hierarchical structure of data files at a time of storage, and a main restoring process of restoring a specific data file selected from within the hierarchical structure restored by the preliminary restoring process.

10 3. The information processing apparatus (100) according to Claim 1 or 2, wherein

the saving unit (160) recognizes a data file that is stored in a priorly determined saving object folder as being the saving object file.

15 4. The information processing apparatus (100) according to Claim 1 or 2, wherein

the saving unit (160) recognizes a data file, having a file name with a priorly determined extension attached thereto, as being the saving object file.

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5. The information processing apparatus (100) according to any one of Claims 1 to 4, wherein

the saving unit (160), in executing the management information storing process, stores the management information into a removable, portable information recording medium (400), and

25 the restoring unit (170), in executing the restoring process, references the management information stored in the portable information recording medium (400).

30 6. The information processing apparatus (100) according to any one of Claims 1 to 5, wherein

address information on the external storage device that is to be a saving destination of the saving object file is used as the management information.

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7. The information processing apparatus (100) according to any one of

Claims 1 to 6, wherein

the saving unit (160) executes, in executing the saving process, a process of dividing a saving object file into a plurality of division files based on a predetermined dividing method and saving the individual division files respectively into mutually different storage devices (310, 320, 330) and has a function of preparing management information that includes information indicating the predetermined dividing method, and

the restoring unit (170) restores the saving object file based on the information indicating the predetermined dividing method that is included in the management information.

8. The information processing apparatus (100) according to any one of Claims 1 to 7, wherein

the saving unit (160) executes, in executing the saving process, a process of saving a saving object file into the external storage device (300) upon encrypting the file based on a predetermined encrypting method and has a function of preparing management information that includes information indicating the predetermined encrypting method, and

the restoring unit (170) restores the saving object file by executing a decrypting process based on the information indicating the predetermined encrypting method that is included in the management information.

9. The information processing apparatus (100) according to any one of Claims 1 to 8, wherein

in executing the deleting process, the saving unit (160) performs a process of deleting even a saving object file that is spread in the memory.

10. A computer program that makes a computer function as the information processing apparatus (100) according to any one of Claims 1 to 9 or a computer-readable recording medium recording said program.

11. A method for ensuring security of data according to each individual user when an information processing device (100), comprising:

a data storage unit (110) for storing data files;

a memory (130) for spreading a data file, stored in the data storage unit, as necessary;

a user management unit (140), preventing multiple logon by a plurality of users by prohibiting, after a predetermined user has performed a logon procedure, logon procedures by other users until a logoff procedure concerning said predetermined user is performed;

- 5 a spreading/storing unit (120), executing, based on an operation of a user who is logged on, a file spreading process of spreading a predetermined data file, stored in the data storage unit (110), onto the memory (130), and a file storing process of storing a predetermined data file, spread on the memory (130), into the data storage unit (110); and
- 10 a program executing unit (150), executing, based on an operation of a logged-on user, a predetermined application program and a process of preparing a new data file on the memory (130) or a renewing process on an existing data file spread on the memory (130);

15 is shared by a plurality of users, the method for ensuring security in information processing apparatus being characterized in making the information processing apparatus (100) perform:

- 20 a saving step of executing, when a specific user executes a logoff procedure, a saving object recognizing process of recognizing, from among data files stored in the data storage unit (110), all or a predetermined portion of data files prepared or renewed based on tasks by a specific user as a saving object file or files, a saving process of copying and thereby saving the saving object file or files into an external storage device (300) via a network (200), a deleting process of deleting the saving object file or files stored in the data storage unit (110), a management information preparing process of preparing management information necessary for copying and restoring the saving object file or files, saved in the external storage device (300), into the data storage unit (110), and a management information storing process of storing the prepared management information into an external storage location (400); and
- 25 a restoring step of executing, as necessary after the specific user executes the logon procedure, a restoring process of referencing the management information and thereby copying and restoring the saving object file or files, saved in the external storage device (300), into the data storage unit (110).

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35 12. The security ensuring method according to Claim 11, wherein

the restoring step comprises a preliminary restoring step of restoring a hierarchical structure of data files at a time of storage, and a main restoring step of restoring a specific data file selected from within the hierarchical structure restored by the preliminary restoring step.

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13. A computer program that makes a computer execute the saving step and the restoring step of the security ensuring method according to Claim 11 or 12 or a computer-readable recording medium recording said program.